



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2022-0155; Project Identifier MCAI-2021-00585-T; Amendment 39-22075; AD 2022-12-03]**

**RIN 2120-AA64**

**Airworthiness Directives; MHI RJ Aviation ULC (Type Certificate Previously Held by Bombardier, Inc.) Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain MHI RJ Aviation ULC Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes; Model CL-600-2C10 (Regional Jet Series 700, 701 & 702) airplanes; Model CL-600-2C11 (Regional Jet Series 550) airplanes; Model CL-600-2D15 (Regional Jet Series 705) airplanes; Model CL-600-2D24 (Regional Jet Series 900) airplanes; and Model CL-600-2E25 (Regional Jet Series 1000) airplanes. This AD was prompted by reports of displayed headings changing from MAG to TRU with no pilot action, which may result in misleading heading information on both primary function displays (PFDs) and multi-function displays (MFDs), and misleading course information on flight management systems (FMSs). This AD requires amending the existing airplane flight manual (AFM) to provide the flightcrew with updated procedures for accurate heading and course information. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF

PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this final rule, contact MHI RJ Aviation Group, Customer Response Center, 3655 Ave. des Grandes-Tourelles, Suite 110, Boisbriand, Québec J7H 0E2 Canada; North America toll-free telephone 833-990-7272 or direct-dial telephone 450-990-7272; fax 514-855-8501; email [thd.crj@mhirj.com](mailto:thd.crj@mhirj.com); Internet [mhirj.com](http://mhirj.com). You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at [regulations.gov](http://regulations.gov) by searching for and locating Docket No. FAA-2022-0155.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at [regulations.gov](http://regulations.gov) by searching for and locating Docket No. FAA-2022-0155; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Thomas Niczky, Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email [9-avs-nyacocos@faa.gov](mailto:9-avs-nyacocos@faa.gov).

#### **SUPPLEMENTARY INFORMATION:**

## Background

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued TCCA AD CF-2021-19, issued May 13, 2021 (TCCA AD CF-2021-19) (also referred to after this as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for certain MHI RJ Aviation ULC Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes; Model CL-600-2C10 (Regional Jet Series 700, 701 & 702) airplanes; Model CL-600-2C11 (Regional Jet Series 550) airplanes; Model CL-600-2D15 (Regional Jet Series 705) airplanes; Model CL-600-2D24 (Regional Jet Series 900) airplanes; and Model CL-600-2E25 (Regional Jet Series 1000) airplanes. You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) by searching for and locating Docket No. FAA-2022-0155.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain MHI RJ Aviation ULC Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes; Model CL-600-2C10 (Regional Jet Series 700, 701 & 702) airplanes; Model CL-600-2C11 (Regional Jet Series 550) airplanes; Model CL-600-2D15 (Regional Jet Series 705) airplanes; Model CL-600-2D24 (Regional Jet Series 900) airplanes; and Model CL-600-2E25 (Regional Jet Series 1000) airplanes. The NPRM published in the *Federal Register* on April 1, 2022 (87 FR 19026). The NPRM was prompted by reports of displayed headings changing from MAG to TRU with no pilot action, which may result in misleading heading information on both PFDs and MFDs, and misleading course information on FMSs. The NPRM proposed to require amending the existing AFM to provide the flightcrew with updated procedures for accurate heading and course information. The FAA is issuing this AD to prevent operation outside the terrain and obstacle protection provided in instrument procedure and route designs, which could result in reduced operational safety margins. See the MCAI for additional background information.

## **Discussion of Final Airworthiness Directive**

### **Comments**

The FAA received a comment from the Air Line Pilots Association, International (ALPA) who supported the NPRM without change.

### **Conclusion**

The FAA reviewed the relevant data, considered the comment received, and determined that air safety requires adopting this AD as proposed. Except for minor editorial changes, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products.

### **Related Service Information under 1 CFR Part 51**

MHI RJ Aviation ULC has issued the following service information, which provides a procedure for revising, among other procedures, the “Uncommanded True Heading Indication.”

- Section 05-15 – Instrument Systems, Chapter 5, ABNORMAL PROCEDURES, MHI RJ Model CL-600-2B19 AFM, CSP A-012, Volume 1, Revision 74, dated July 3, 2020.

Bombardier has issued the following service information, which provides a procedure for revising, among other procedures, the “Uncommanded True Heading Indication.” These documents are distinct since they apply to different airplane models.

- Section 05-15 – Instrument Systems, Chapter 5, ABNORMAL PROCEDURES, Bombardier CRJ Series Regional Jet Model CL-600-2C10 (Series 700, 701, 702) and CL-600-2C11 (Series 550) AFM, CSP B-012, Revision 30, dated February 28, 2020.

- Section 05-15 – Instrument Systems, Chapter 5, ABNORMAL PROCEDURES, Bombardier CRJ Series Regional Jet Model CL-600-2D24 (Series 900)

and Model CL-600-2D15 (Series 705) AFM, CSP C-012, Volume 1, Revision 24, dated March 27, 2020.

- Section 05-15 – Instrument Systems, Chapter 5, ABNORMAL

PROCEDURES, Bombardier CRJ Series Regional Jet Model CL-600-2E25 (Series 1000) AFM, CSP D-012, Revision 23, dated February 14, 2020.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

### **Costs of Compliance**

The FAA estimates that this AD affects 1,113 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

#### **Estimated costs for required actions**

<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
1 work-hour X \$85 per hour = \$85	\$0	\$85	\$94,605

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency’s authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products

identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **The Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

**2022-12-03 MHI RJ Aviation ULC (Type Certificate Previously Held by Bombardier, Inc.):** Amendment 39-22075; Docket No. FAA-2022-0155; Project Identifier MCAI-2021-00585-T.

#### **(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER

DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to MHI RJ Aviation ULC (type certificate previously held by Bombardier, Inc.) airplanes, certificated in any category, as identified in paragraphs (c)(1) through (3) of this AD.

(1) Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes equipped with inertial reference system (IRS) part number (P/N) 465020-0400-0400, 465020-0400-0401, 465020-0400-0402, or 465020-0400-0403.

(2) Model CL-600-2C10 (Regional Jet Series 700, 701 & 702) airplanes, Model CL-600-2C11 (Regional Jet Series 550) airplanes, Model CL-600-2D15 (Regional Jet Series 705) airplanes, and Model CL-600-2D24 (Regional Jet Series 900) airplanes, equipped with IRS P/N 465020-0400-0401, 465020-0400-0402 or 465020-0400-0403.

(3) Model CL-600-2E25 (Regional Jet Series 1000) airplanes, equipped with IRS P/N 465020-0400-0402 or 465020-0400-0403.

**(d) Subject**

Air Transport Association (ATA) of America Code 34; Navigation System.

**(e) Unsafe Condition**

This AD was prompted by reports of displayed headings changing from MAG to TRU with no pilot action, which may result in misleading heading information on both primary function displays (PFDs) and multi-function displays (MFDs), and misleading course information on flight management systems (FMSs). The FAA is issuing this AD to prevent operation outside the terrain and obstacle protection provided in instrument procedure and route designs, which could result in reduced operational safety margins.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Amend Existing Airplane Flight Manual (AFM)**

Within 30 days after the effective date of this AD: Revise the existing AFM to incorporate the information specified in Section 05-15 – Instrument Systems, Chapter 5, ABNORMAL PROCEDURES, of the applicable AFM identified in figure 1 to paragraph (g) of this AD.

**Figure 1 to paragraph (g) – AFM Revision**

<b>Airplane Model</b>	<b>AFM Title</b>	<b>AFM Revision/Date</b>
CL-600-2B19	MHI RJ Model CL-600-2B19 AFM, CSP A-012, Volume 1	Revision 74, dated July 3, 2020
CL-600-2C10 and -2C11	Bombardier CRJ Series Regional Jet Model CL-600-2C10 (Series 700, 701, 702) and CL-600-2C11 (Series 550) AFM, CSP B-012	Revision 30, dated February 28, 2020
CL-600-2D15 and -2D24	Bombardier CRJ Series Regional Jet Model CL-600-2D24 (Series 900) and Model CL-600-2D15 (Series 705) AFM, CSP C-012, Volume 1	Revision 24, dated March 27, 2020
CL-600-2E25	Bombardier CRJ Series Regional Jet Model CL-600-2E25 (Series 1000) AFM, CSP D-012	Revision 23, dated February 14, 2020

**(h) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600



Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or MHI RJ Aviation ULC's TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

**(i) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) TCCA AD CF-2021-19, issued May 13, 2021, for related information. This MCAI may be found in the AD docket on the Internet at [regulations.gov](https://www.regulations.gov) by searching for and locating Docket No. FAA-2022-0155.

(2) For more information about this AD, contact Thomas Niczky, Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7347; email [9-avs-nyaco-cos@faa.gov](mailto:9-avs-nyaco-cos@faa.gov).

**(j) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Section 05-15 – Instrument Systems, Chapter 5, ABNORMAL PROCEDURES, Bombardier CRJ Series Regional Jet Model CL-600-2C10 (Series 700, 701, 702) and CL-600-2C11 (Series 550) Airplane Flight Manual (AFM), CSP B-012, Revision 30, dated February 28, 2020.

(ii) Section 05-15 – Instrument Systems, Chapter 5, ABNORMAL PROCEDURES, Bombardier CRJ Series Regional Jet Model CL-600-2D24 (Series 900) and Model CL-600-2D15 (Series 705) AFM, CSP C-012, Volume 1, Revision 24, dated March 27, 2020.

(iii) Section 05-15 – Instrument Systems, Chapter 5, ABNORMAL PROCEDURES, Bombardier CRJ Series Regional Jet Model CL-600-2E25 (Series 1000) AFM, CSP D-012, Revision 23, dated February 14, 2020.

(iv) Section 05-15 – Instrument Systems, of Chapter 5, ABNORMAL PROCEDURES, of MHI RJ Model CL-600-2B19 AFM, CSP A-012, Volume 1, Revision 74, dated July 3, 2020.

(3) For service information identified in this AD, contact MHI RJ Aviation Group, Customer Response Center, 3655 Ave. des Grandes-Tourelles, Suite 110, Boisbriand, Québec J7H 0E2 Canada; North America toll-free telephone 833-990-7272 or direct-dial telephone 450-990-7272; fax 514-855-8501; email [thd.crj@mhirj.com](mailto:thd.crj@mhirj.com); Internet [mhirj.com](http://mhirj.com).

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov), or go to: [archives.gov/federal-register/cfr/ibr-locations.html](http://archives.gov/federal-register/cfr/ibr-locations.html).

Issued on June 2, 2022.

Christina Underwood, Acting Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

Editorial note: This document was received for publication by the Office of the Federal Register on September 23, 2022.

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